

In the Specification:

Please number the first page as page "1".

Page 3, line 4, should read: ID3v2 spec, Paragraph commencing on line 8

Deleted:

<http://www.id3.org/easy.html>; and
<http://www.id3.org/id3v2.3.0.html> ¶

should now read:

--A survey of techniques for multimedia data labeling and particularly for copyright labeling using watermarking through encoding low bit-rate information is presented by Langelaar, G. C. et al in "Copy Protection for Multimedia Data based on Labeling Techniques"--

Deleted: ¶

Page 9, last paragraph, should read:

--Examples of the types of media files susceptible to operating with the embedded executable code sequence programs of the invention include, but are not limited to, the previously enumerated audio, video, still image, 3-D, or a combination of these or other media formats. Among these are MP3, SDMI, CD audio, AIFF, AU, WAV, equipment offered under the trademarks RealAudio, and Quicktime, MPEG, AVI, JPEG, JFIF, GIF, PNG, TIFF, DXF, or VRML.--

Formatted: Underline

Formatted: Underline

Page 10, first and second paragraphs, should now read:

--Among the types of executable code programs which may be embedded into such media files are Java files. Equipments marketed under the trademarks Macromedia Director, Shockwave or Flash, Perl, VRML, TCL, Visual Basic, machine code, byte codes, any archive format such as cab, jar or zip; or any combination of any of these programs with any non-executable media, including but not limited to image, audio, 3-D, or text. The content may be, but is not limited to, advertising, as previously mentioned, entertainment, utilities, applications, education, design, interactive advertising, transactional merchandising, or interactive content such as music, video games, polls and contests, and the like.--

Formatted: Underline

It is now in order to explain how the encoding and code embedding in the pre-prepared media file may be implemented in accordance with the invention. Reference is accordingly made to Figure 1 wherein a pre-prepared media file, so-

labeled, (audio, image, video, 3-D, database, or other multimedia data as before mentioned), and a predetermined prepared executable code sequence (such as the previously mentioned computer programs marketed under the trademarks

Formatted: Underline

Java class files, Macromedia Shockwave and Flash, binary executable, byte codes, Visual Basic, Java Script, etc.) are shown fed to a encoding processor for embedding the code sequences, such as, for example, of the encoding types later described. Well-known encoding processes may be used depending on the media file format and any well-known encoding processes may be used depending on the media file format and any well-known compression techniques for the media file to be created, as later discussed.

There then results a modified media file with embedded executable code without affecting its backwards compatibility with existing file formats, and without substantially affecting the user's experience of playback of the pre-prepared media file content.

Page 11, last paragraph and continuing on page 12, should now read:

--As a more specific example, Figure 3 diagrams the use of the before-described MPEG audio file into which the executable code is to be embedded.

Reference is again made to the earlier cited "MPEG Spec" and "ID3v2 Spec" publications -- -- the MPEG audio file being (though not limited to) an MPEG-I, MPEG-2, or MPEG-2.5 file, to be encoded using the Layer I, II, or III encodings.

As in Figure 1, the executable code, so-labeled in Figure 3, may be in any kind of

computer programs such as Java (trademark) class files, Macromedia Shock wave and Flash, (trademark) binary executables, byte codes, Visual Basic, Java Script (trademark), etc. The executable code is first shown unsynchronized by

Formatted: Underline

Formatted: Underline

Formatted: Underline

modifying any consecutive bytes of form %l 1111111 111xxxxx so that they do not resemble a synchronization byte in the MPEG audio stream. The code is then encapsulated in ID3v2 format, and inserted in the encoding process, as shown,

Deleted: documented at the public web site <http://id3.org>

at the beginning of the MP3 audio stream as an ID3v2 tag. This results in an

MPEG audio file with the embedded executable code, backwards compatible but slightly larger to accommodate the embedded code, and with the audio data unaffected, and any occurrences of the MPEG sync signal taken care of by the unsynchronization scheme.--

Page 12, paragraph commencing with line 13, should now read:

--More specifically, a preferred encoding system will now be detailed for such an MPEG audio stream, particularly with reference to the before cited publicly available ID3v2.3.0 specification ("ID3v2"). There are a number of existing content types described in the ID3v2 spec, there named "frames". Frames are defined primarily for the ASCII text data such as song titles and lyrics, or for a still image to be embedded in the MPEG audio file. In this description, we create and define a new type of ID3 frame, named "EXEC", which is designed as a container for executable content, generally intended to be executed while the audio is playing.--

Deleted: , located at
<http://www.id3.org/id3v2.3.0.html>
Formatted: Tabs: 4.19", Left

Page 14, third paragraph, commencing on line 13, should now read:

--Based on the MIME type of the executable code, an appropriate execution environment is instantiated. In the case of the application/x-shockwave-flash type discussed previously, a reference execution environment is described by Macromedia in the Flash Standards Web page.--

Deleted: located at
Deleted: <http://www.macromedia.com/software/flash/open/>.

The execution environment is then invoked to begin execution of the executable code simultaneously with the playback of the audio file. Additional Application Programming Interfaces (APIs) may be defined with reference to the execution environment to control the exact behavior of the execution environment relative to the audio file while playback is occurring.

Page 15, second paragraph, commencing with line 4, should now read:

--[MIME] Freed, N. and N. Borenstein, "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies", RFC 2045, Nov. 1996, and--

Deleted: [url:http://www.unicode.org](http://www.unicode.org)

Page 15, third paragraph, commencing with line 7, should now read:

--[UNICODE] ISO/IEC 10646-1:1993.
Universal Multiple-Octet coded Character Set (UCS), Part 1: Architecture and Basic Multilingual Plane. Technical committee/subcommittee: JTC 1/SC 2.--

Deleted: [url:http://www.unicode.org](http://www.unicode.org)